

m.m.L  
14/02/24

# Work Order ID 112711

Wednesday, February 05, 2014 2:58:35 PM

**\*112711\***

Page 2

Item ID: D3391-025 Accept **\*N900040100\*** Setup Start **\*NS1\***  
 Revision ID: Stop **\*NS2\***  
 Item Name: Aft Tube Assembly  
 Start Date: 2/5/2014 Start Qty: 1.00 **\*1\*** Cust Item ID:  
 Required Date: 2/14/2014 Req'd Qty: 1.00 **\*1\*** Customer:  
 Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120 <b>*120*</b> HAAS 1 HAAS CNC vertical machine #1	HAAS CNC VERTICAL MACHINING #1  Memo 1-Machine as per Folio FA 599 Rev: <u>AA</u> & Dwg D3391 Rev: <u>I</u> 2-Deburr	0.00  0.00	<i>and</i>	14/03/16		<u>1</u>	<u>0</u>		
130 <b>*130*</b> QC Quality Control	QC2- Inspect parts off machine FAI/FAIB  Memo	0.00  0.00	<i>and</i>	14/03/16		<u>1</u>	<u>0</u>		
140 <b>*140*</b> QC Quality Control	QC8- Inspect parts - second check  Memo ***INSPECT INSIDE BORE***	0.00  0.00	<i>B.a</i>	14/03/19		<u>1</u>	<u>0</u>		DAS 08 9-89



# Work Order ID 112711

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Item ID: D3391-025

Accept

\*N900040100\*

Setup Start \*NS1\*

Revision ID:

Stop \*NS2\*

Item Name: Aft Tube Assembly

Start Date: 2/5/2014 Start Qty: 1.00 \*1\*

Cust Item ID:

Required Date: 2/14/2014 Req'd Qty: 1.00 \*1\*

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start \*NR1\*

QC:

Date:

SPC (Y/N):

Date:

Stop \*NR2\*

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

150

\*1150\*

Skid tubes

Skid tubes

0.00

Memo

0.00

Skid tubes

1-Drill (PILOT HOLE) aft cap holes per Dwg D3391 using DT8803

DC 14/03/19

160

\*1160\*

CNC Bend 1

BENDING MACHINE - SKIDTUBES

0.00

Memo

0.00

CNC Delta 100 Bender

Form as per Dwg D3391 Using Bend Prog 3391025

DC 14/03/25

170

\*1170\*

QC

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

Quality Control

DD 14-3-25

H 4.26

DAS  
03  
2-89

11 11-32

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Item ID: D3391-025

Accept

**\*N900040100\***

Setup Start

**\*NS1\***

Revision ID:

Stop

**\*NS2\***

Item Name: Aft Tube Assembly

Start Date: 2/5/2014 Start Qty: 1.00

**\*1\***

Cust Item ID:

Required Date: 2/14/2014 Req'd Qty: 1.00

**\*1\***

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

**\*NR1\***

QC:

Date:

SPC (Y/N):

Date:

Stop

**\*NR2\***Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

180

0.00

**\*180\***

Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1-Open Aft cap pilot hole to .208" as per Dwg D3391

2-Drill float bag holes using DT8809 as per Dwg D3391(Holes marked "A" Only.

3-Drill wearplate holes as per Dwg D3391 using DT8878(Mid Tube) & DT8217  
Wearplate Jig.

\*\*\*\*\*Do Not Open To Finished Size\*\*\*\*\*

4-Drill Wearshoe holes as per DWG D3391 using DT8939 locating from 2  
previously drilled aft wearplate holes.

5-Open wearplate holes to 0.297" and c'bore as per dwg D3391

6-Open up all float bag holes to 0.328" and c'sink as per Dwg D3391.

7-Deburr

8- Scribe batch # on fwd end

DC 14/03/28

**Work Order ID 112711**

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Item ID: D3391-025

Accept

**\*N900040100\***

Setup Start

**\*NS\***

Revision ID:

Item Name: Aft Tube Assembly

Stop

**\*NS2\***

Start Date: 2/5/2014 Start Qty: 1.00

**\*1\***

Cust Item ID:

Required Date: 2/14/2014 Req'd Qty: 1.00

**\*1\***

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

**\*NR1\***

QC:

Date:

SPC (Y/N):

Date:

Stop

**\*NR2\***Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

190

QC5- Inspect part completeness to step on W/O

0.00

**\*190\***

QC

Memo

0.00

Quality Control

① 1403-31

200

Chemical Conversion Coat per QSI005 4.1

0.00

**\*200\***

HandFinish

Memo

0.00

Hand Finishing

14-3-31 JLL/DGC

210

QC7-Inspect Chemical Conversion Coat

0.00

**\*210\***

QC

Memo

0.00

Quality Control

1 14/03/31





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Start Date: 2/5/2014 Start Qty: 1.00 **\*1\*** Cust Item ID:  
Required Date: 2/14/2014 Req'd Qty: 1.00 **\*1\*** Customer:  
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Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

220

**\*220\***

Skidtubes

Skidtubes

Skidtubes

**Memo**

1- Instal spacers as per dwg D3391

A/R Magnabond 6398 Batch: 127227exp. date: 14/05/05  
cure time 12hrs as per QSI0015

2- Grind crossbolts flush

3- Back drill using #9 drill

4- Touchup Magnabond

5- Deburr

0.00

0.00

0.00

230

**\*230\***

QC

Quality Control

QC5- Inspect part completeness to step on W/O

**Memo**

① 14.04.02

DAS  
9  
9-89

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Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start \*NR1\*  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
235	Pressure Wash per QSI005 4.3	0.00							
*235*	HandFinish	0.00							
Hand Finishing	Memo AND REALODINE AS PER PAR09-043								
240	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum	0.00							
*240*	Powdercoat	0.00							
Powder Coating	Memo START TIME: 1:45 OVEN TEMPERATURE: 320° FINISH TIME: 2:15								
250	QC3- Inspect Part Finish	0.00							
*250*	QC	0.00							
Quality Control	Memo								

1 761442  
 1 4-4-9. DAS 34 9.89  
 ix 4 1410410

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Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
260	HandFinishing	0.00							
<b>*260*</b>	HandFinish								
Hand Finishing	<p><b>Memo</b></p> <p>1-Install inserts as per Dwg D3391</p> <p>2-Install Aft Cap as per Dwg D3391</p> <p>A/ R Sikaflex-241/-291 <u>M128569</u></p> <p>Sikaflex expiry date: <u>12/10</u></p> <p>✓3- INSTALL WEARPLATES AS PER DWG</p>	0.00							
270	QC5- Inspect part completeness to step on W/O	0.00							
<b>*270*</b>	QC								
Quality Control	<b>Memo</b>	0.00							
280	Identify as per dwg & Stock Location: <u>101A</u>	0.00							
<b>*280*</b>	Packaging								
Packaging	<b>Memo</b>	0.00							

*SPF*  
*4/14/15*

*PACKAGING*  
*OFFSHORE*

*1x* *φ* *12 1/2*

*1x* *φ* *14-04-23*

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**\*112711\***

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Item ID: D3391-025      Accept      **\*N900040100\***      Setup Start **\*NS1\***  
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Start Date: 2/5/2014      Start Qty: 1.00      **\*1\***      Cust Item ID:  
Required Date: 2/14/2014      Req'd Qty: 1.00      **\*1\***      Customer:  
Reference:

Approvals:      Process Plan: \_\_\_\_\_      Date: \_\_\_\_\_      Tooling: \_\_\_\_\_      Date: \_\_\_\_\_      Run Start **\*NR1\***  
QC: \_\_\_\_\_      Date: \_\_\_\_\_      SPC (Y/N): \_\_\_\_\_      Date: \_\_\_\_\_      Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
290	QC21- Final Inspection - Work Order Release	0.00							
<b>*290*</b>									
QC	Memo	0.00							
Quality Control									

*Handwritten: 14-11-23*

*Handwritten: 14-11-23*

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

## WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width: 100%;"> <tr> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>													
Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>													
Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>													
Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>														

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

### FAULT CATEGORY

<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence
--	--	---

☐ Outside Dimensions  
☐ Over/Under tolerance  
☐ Part Incorrect  
☐ Part Lost/Missing  
☐ Part Moved  
☐ Positioned Wrong  
☐ Power Loss/Surge

☐ Pressure/Forced  
☐ Set-up  
☐ Temperature/cure  
☐ Weld  
☐ Wrong Stock/Pulled  
☐ Other

W. 085 2002 100

1950

610000000000

200 100

100000000000

1000000

1000000

# Picklist Print

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Page 1

Work Order ID: 112711

\*112711\*

Parent Item: D3391-025

\*D3391-025\*

Parent Item Name: Aft Tube Assembly

Start Date: 2/5/2014

Required Date: 2/14/2014

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev B 06-02-07 ECN773 dwg rev. D EC  
 IPP Rev:C 06-03-28 Update Manuf. Instructions JLM  
 IPP rev D 07.03.20 revF dwg EC  
 IPP rev E 07.11.07 rev G dwg ecn 1053p EC verified by: DD  
 IPP Rev:F 07-11-13 ECN 1056 DD verified by: EC  
 IPP Rev:G 08-09-10 revH as per dwg DD verified by:EC IPP Rev:H  
 11.11.14 AS PER REV.I DD verified by:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D4095-047		Manufactured	No			260	Each	18.0000	1	1			
*D4095-047*									**				
Wearpad Assembly													
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				FP001		18		B108289					
				102241		2							
				108289		16							
D4095-049		Manufactured	No			260	Each	13.0000	1	1			
*D4095-049*									**				
Wearpad Assembly													
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				FP001		12							
				109670		12							
				FP002		1							
				102216		1							
D6014-090		Manufactured	No			100	Each	77.0000	1	1			
*D6014-090*									**				
ALUMINUM EXTRUSION													
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				LG003		77							
				79742		17							
				86063		60							

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Work Order ID: 112711

**\*112711\***

Parent Item: D3391-025

**\*D3391-025\***

Parent Item Name: Aft Tube Assembly

Start Date: 2/5/2014

Required Date: 2/14/2014

Start Qty: 1.00

Required Qty: 1.00

D3670-4-200

Manufactured No

230 Each

351.0000 4 4

**\*D3670-4-200\***

Bushing

\*\*

OK 17/03/31

Location

Loc Qty

Loc Code

FG	10
87709	10
LG001	341
103880	60
109108	242
96240	39

D2646

Manufactured No

270 Each

23.0000 1 1

**\*D2646\***

Aft Cap

\*\*

OK 17/03/31

Location

Loc Qty

Loc Code

FG	4
85848	2
90495	2
FP001	19
103306	18
107857	1

D3672-1

Manufactured No

270 Each

850.0000 2 2

**\*D3672-1\***

Phenolic Washer

\*\*

OK 17/03/31

Location

Loc Qty

Loc Code

FG	10
85222	10
ST060	840
103845	100
93886	522
99099	218

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Shop Packet Print

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Parent Item: D3391-025

Parent Item Name: Aft Tube Assembly

\*112711\*

\*D3391-025\*

Start Date: 2/5/2014

Required Date: 2/14/2014

Start Qty: 1.00

Required Qty: 1.00

ALS4-1032-130 AELS4-1032-130 Purchased

No

260

Each

57.0000

14

14

**\*AI S4-1032-130\***

Rivnut

\*\*

all 1/10/14

Location

Loc Qty

Loc Code

st510

57

11128649

x14

M126109

57

ALS4-1032-225 AELS8-1032-225 Purchased

No

270

Each

101.0000

8

8

**\*AI S4-1032-225\***

Rivnut

\*\*

all 1/10/14

Location

Loc Qty

Loc Code

FG

30

M127028

30

ST280

10

M127028

10

st555

61

M127092

61

AN3C4A

Purchased

No

270

Each

2,616.000

6

6

**\*AN3C4A\***

Bolt

\*\*

all 1/10/14

Location

Loc Qty

Loc Code

FG

20

122814

20

ST513

2596

125388

1835

M127410

261

M127832

500

11128739

x6

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Parent Item: D3391-025

**\*D3391-025\***

Parent Item Name: Aft Tube Assembly

Start Date: 2/5/2014

Required Date: 2/14/2014

Start Qty: 1.00

Required Qty: 1.00

AN3C5A Purchased No 270 Each

1,881.000 4 4

**\*AN3C5A\***

Bolt

**\*\***

*all 1/10 & 1/14*

Location

Loc Qty

Loc Code

FG 5

122800 5

ST350 1876

M128057 1876

NAS1149C0332R Purchased No 270 Each

9,652.000 10 10

**\*NAS1149C0332R\***

WASHER

**\*\***

*all 1/10 & 1/14*

Location

Loc Qty

Loc Code

GA 1169

125654 1169

st510 8483

m126319 865

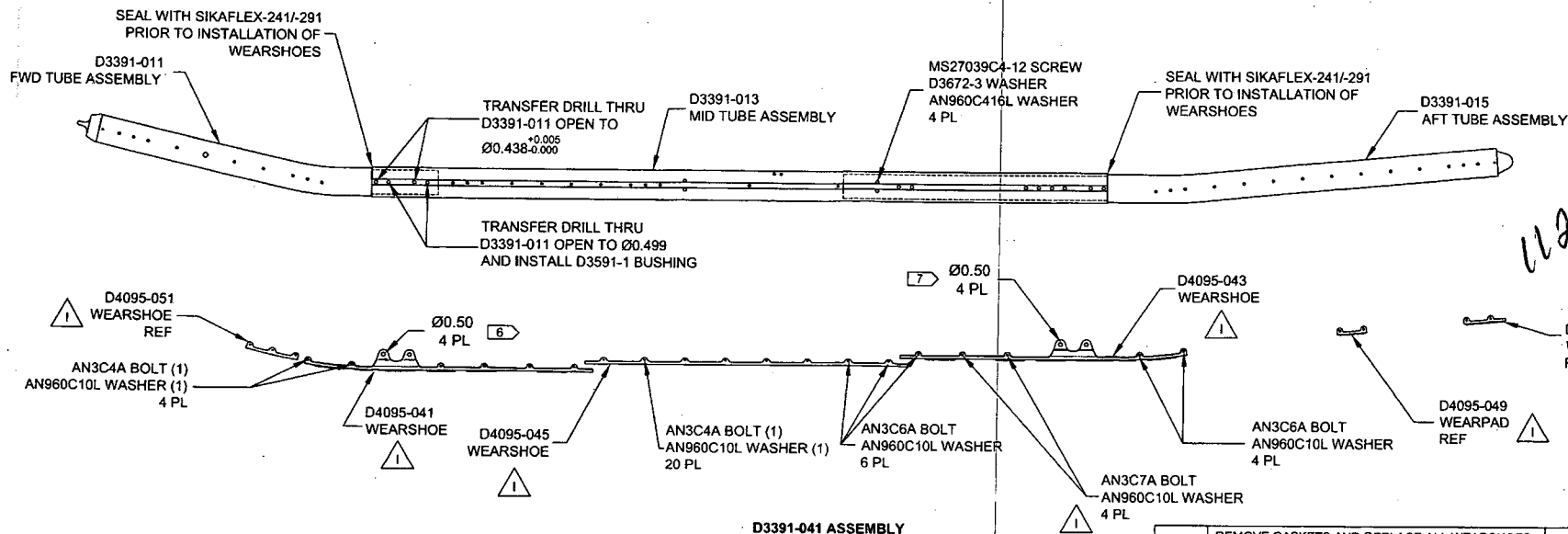
m127306 2500

m127410 3000

m127831 2118

*M1120391*

*X10*



**D3391-041 FLOAT SKIDTUBE ASSEMBLY PARTS LIST**

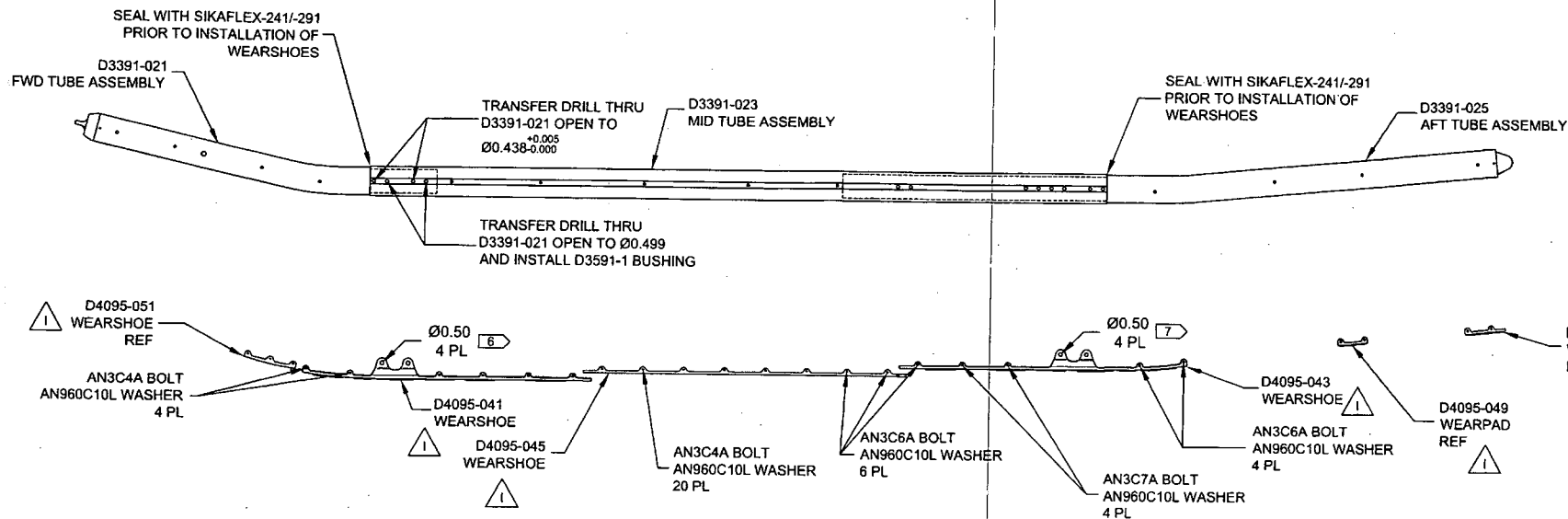
QTY	PART NUMBER	DESCRIPTION
X	D3391-041	FLOAT SKIDTUBE ASSEMBLY
1	D3391-011	FWD TUBE ASSEMBLY
1	D3391-013	MID TUBE ASSEMBLY
1	D3391-015	AFT TUBE ASSEMBLY
2	D3591-1	BUSHING
4	D3672-3	WASHER
1	D4095-041	WEARSHOE
1	D4095-043	WEARSHOE
1	D4095-045	WEARSHOE
1	D4095-047	WEARSHOE
1	D4095-049	WEARSHOE
1	D4095-051	WEARSHOE
24	AN3C4A	BOLT
10	AN3C6A	BOLT
4	AN3C7A	BOLT
38	AN960C10L	WASHER
4	MS27039C4-12	SCREW
4	AN960C416L	WASHER

**GENERAL NOTES**

- 1) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 2) COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY. CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL Ø0.297 SIZE HOLES FOR WEARSHOE INSERTS. C'BORE AS NOTED AND INSTALL INSERTS EXCEPT WHERE INDICATED.
- 6) FIT D4095-041 TO SKIDTUBE WITH D2571 AND D2572 SADDLES INSTALLED WITH APPROPRIATE HARDWARE AND SPACERS IN FORWARD AND AFT HOLES AND TRANSFER DRILL Ø0.50 HOLES FROM SADDLE TO D4095-041
- 7) FIT D4095-043 TO SKIDTUBE WITH D2571 AND D2572 SADDLES INSTALLED WITH THE APPROPRIATE HARDWARE AND SPACERS IN FORWARD AND AFT HOLES AND TRANSFER DRILL Ø0.50 HOLES FROM SADDLE TO D4095-043

**RELEASED**  
2011-11-04  
ECN# 11-662

I	REMOVE GASKETS AND REPLACE ALL WEARSHOES; PARTS LIST UPDATE, ZN A8-1, ZN A8-2, ZN A6-4, ZN B6-8; LPS-3 COATING REMOVED FROM NOTE 2, ZN A3-1, ZN A3-2, REMOVED INSERT AELS-1032-130, ZN B6-4, B2-4, C7-8, C3-6; REMOVED HOLES, ZN D6-4 ZN D2-4, ZN D7-8, ZN D3-8	XDF	11.10.13
H	DRAWING UPDATED TO CURRENT STANDARDS. SHT 1 PL. ADDED D3591-1 BUSHING. ZN C6 Ø0.438 DIM WAS 4 PL. ADDED Ø0.499 DIM AND D3591-1 BUSHING. SHT 2 PL. ADDED D3591-1 BUSHING. ZN C6 Ø0.438 DIM WAS 4 PL. ADDED Ø0.499 DIM AND D3591-1 BUSHING. (FOR FURTHER INFO SEE DSI 9364 & NCR 08-074)	AJS	08.08.20
G	REPLACE NAS INSERTS W/ AELS INSERTS SWITCH TO D3670-XXXX SPACERS FOR INSTALLING FLOAT BAGS, DWG REORGANIZED FOR CLARITY	DC	07.07.31
F	ADD SS WEARSHOE, GASKET REMOVE FWD SADDLE HOLE -011/-021	PH	07.01.18
E	CHANGE TOLERANCE, EASE MANUFACTURE	PH	06.04.25
D	UPDATE TOLERANCE, CHANGE HOLE SIZE	PH	06.01.23
C	LENGTHEN AFT EXTENSION	PH	05.09.27
B	DRAWING UPDATES	PH	05.06.10
A	NEW ISSUE	PH	05.02.07
REV.	DESCRIPTION	BY	DATE
DESIGN	PH	<b>DART AEROSPACE USA, INC</b>	
DRAWN	XDF	KENT, WA	
CHECKED		DRAWING NO.	REV. I
MFG. APPR.		D3391	SHEET 1 OF 8
APPROVED		TITLE	SCALE
DE APPR.		412 FLOAT SKIDTUBE	NTS
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**D3391-043 ASSEMBLY**

**D3391-043 FLOAT SKIDTUBE ASSEMBLY PARTS LIST**

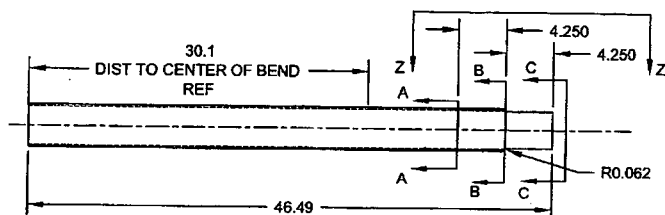
QTY -043	PART NUMBER	DESCRIPTION
X	D3391-043	FLOAT SKIDTUBE ASSEMBLY
1	D3391-021	FWD TUBE ASSEMBLY
1	D3391-023	MID TUBE ASSEMBLY
1	D3391-025	AFT TUBE ASSEMBLY
2	D3591-1	BUSHING
1	D4095-041	WEARSHOE
1	D4095-043	WEARSHOE
1	D4095-045	WEARSHOE
1	D4095-047	WEARPAD
1	D4095-049	WEARPAD
1	D4095-051	WEARSHOE
24	AN3C4A	BOLT
10	AN3C6A	BOLT
4	AN3C7A	BOLT
38	AN960C10L	WASHER

**GENERAL NOTES**

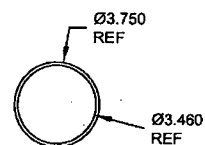
- 1) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 2) COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON"  
AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL Ø0.297 SIZE HOLES  
FOR WEARSHOE INSERTS. C'BORE AS NOTED AND INSTALL INSERTS EXCEPT  
WHERE INDICATED.
- 6) FIT D4095-041 TO SKIDTUBE WITH D2571 AND D2572 SADDLES INSTALLED WITH  
APPROPRIATE HARDWARE AND SPACERS IN FORWARD AND AFT HOLES AND  
TRANSFER DRILL Ø0.50 HOLES FROM SADDLE TO D4095-041
- 7) FIT D4095-043 TO SKIDTUBE WITH D2571 AND D2572 SADDLES INSTALLED WITH  
THE APPROPRIATE HARDWARE AND SPACERS IN FORWARD AND AFT HOLES AND  
TRANSFER DRILL Ø0.50 HOLES FROM SADDLE TO D4095-043

**RELEASED**  
2011-11-04

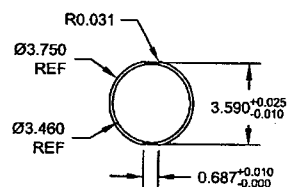
DESIGN	PH	<b>DART AEROSPACE USA, INC</b>	
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CHECKED		DRAWING NO.	REV. 1
MFG. APPR.		D3391	SHEET 2 OF 8
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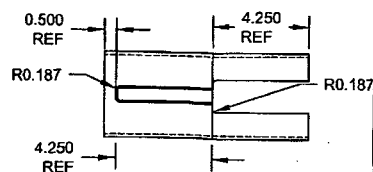
**D3391-1 CUTTING DETAIL**  
(MAKE FROM D6013-047 SKIDTUBE MATERIAL)



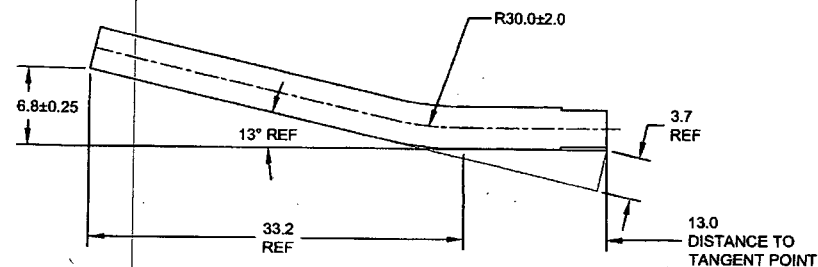
**SECTION A-A**  
SCALE 2X



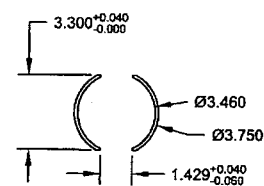
**SECTION B-B**  
SCALE 2X



**VIEW Z-Z**  
SCALE 2X



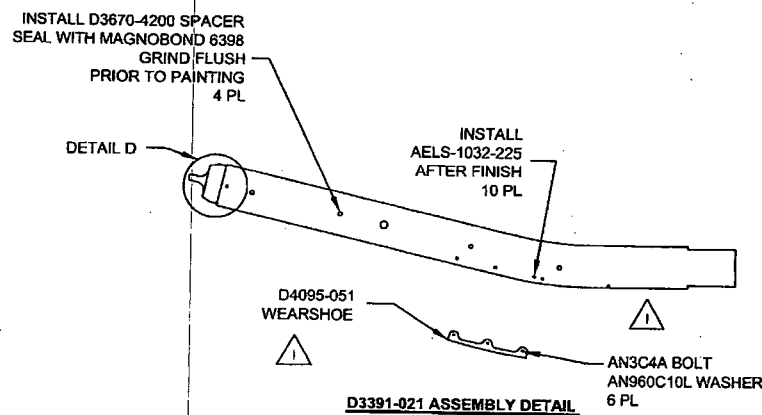
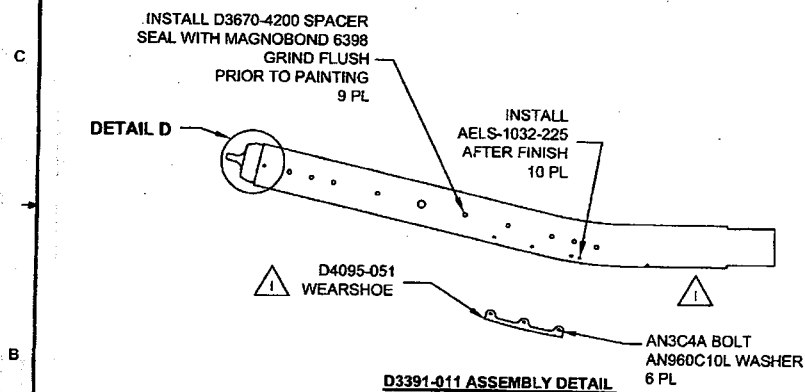
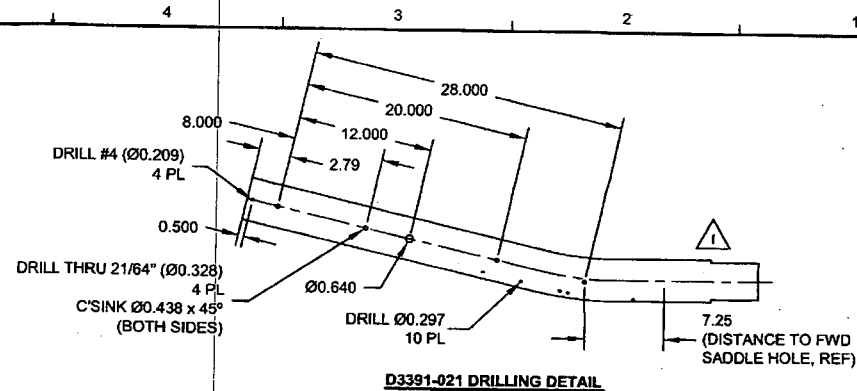
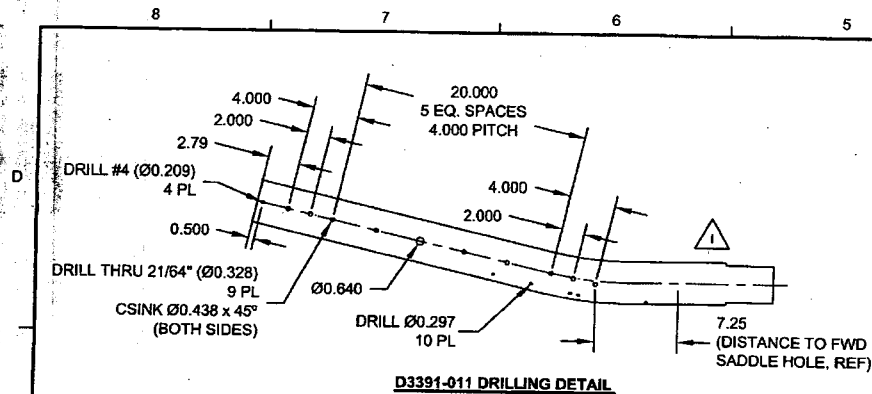
**D3391-011/-021 BENDING DETAIL**  
(MAKE FROM D3391-1)



**SECTION C-C**  
SCALE 2X

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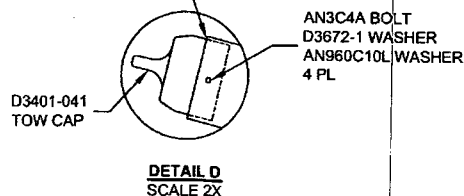
DESIGN	PH	<b>DART AEROSPACE USA, INC</b>	
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D3391-011/-021 FWD TUBE ASSEMBLY PARTS LIST

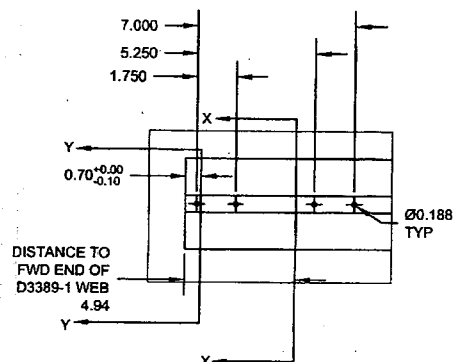
QTY - 011	QTY - 021	PART NUMBER	DESCRIPTION
X	X	D3391-011	FWD TUBE ASSEMBLY
		D3391-021	FWD TUBE ASSEMBLY
1	1	D3401-041	TOW CAP
9	4	D3670-4200	SPACER
4	4	D3672-1	WASHER
1	1	D4095-051	WEARSHOE
1	1	D6013-047	FWD TUBE
10	10	AN3C4A	BOLT
10	10	AN960C10L	WASHER
10	10	AELS-1032-225	INSERT

SEAL WITH  
SIKAFLEX-241/-291



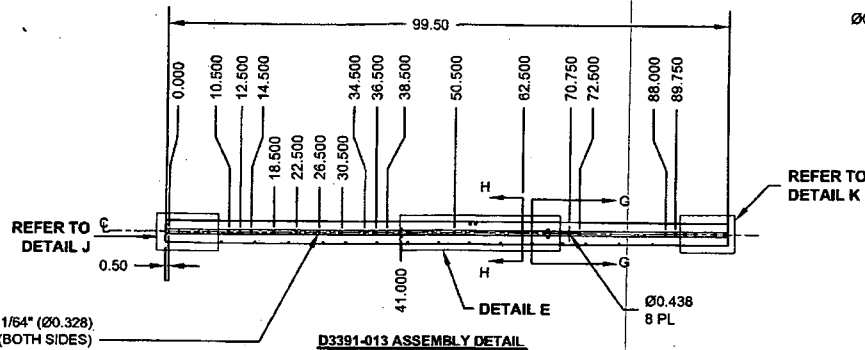
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2011-11-04

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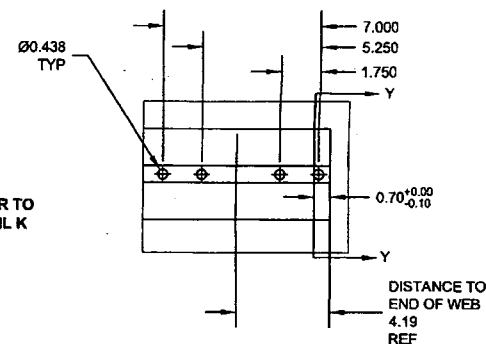


**DETAIL J**  
SCALE 4X

DRILL THRU 21/64" (Ø0.328)  
CSINK Ø0.438 X 45° (BOTH SIDES)  
12 PL



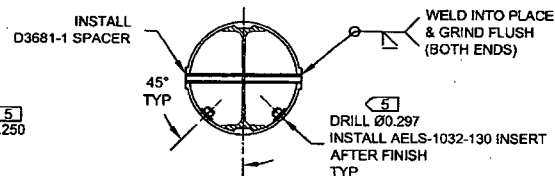
**D3391-013 ASSEMBLY DETAIL**



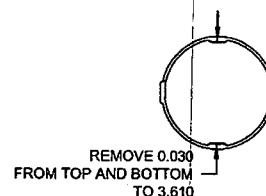
**DETAIL K**  
SCALE 4X



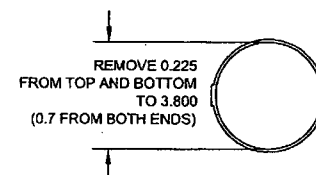
**SECTION G-G**  
SCALE 5X



**SECTION H-H**  
SCALE 5X

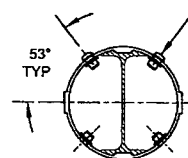


**SECTION X-X**  
SCALE 5X



**SECTION Y-Y**  
SCALE 5X

DRILL Ø0.297  
INSTALL AELS-1032-130 INSERT  
MS27039C1-09 SCREW  
D3672-1 WASHER  
AN960C10L WASHER  
AFTER FINISH  
4 PL



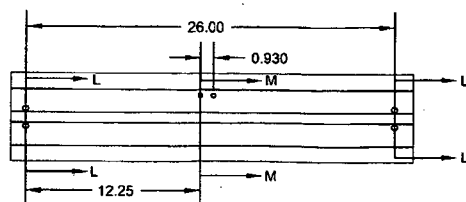
**SECTION M-M**  
SCALE 5X



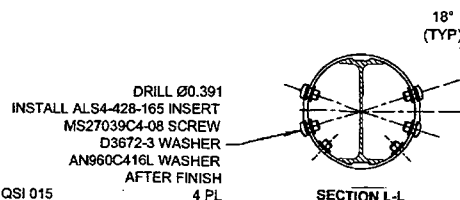
**SECTION LL-LL**  
SCALE 5X

**D3391-013 MID TUBE ASSEMBLY PARTS LIST**

QTY	PART NUMBER	DESCRIPTION
-013		
X	D3391-013	MID TUBE ASSEMBLY
1	D2500-1-100	EXTRUSION
1	D3389-1	WEB
4	D3672-1	WASHER
4	D3672-3	WASHER
12	D3681-1	SPACER
24	AELS-1032-130	INSERT
4	ALS4-428-165	INSERT
4	AN960C10L	WASHER
4	AN960C416L	WASHER
4	MS27039C1-09	SCREW
4	MS27039C4-08	SCREW



**DETAIL E**  
SCALE NONE



**SECTION L-L**  
SCALE 5X

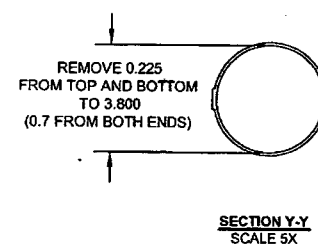
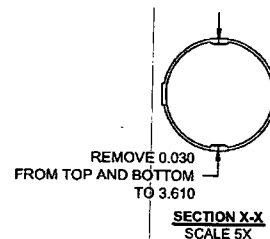
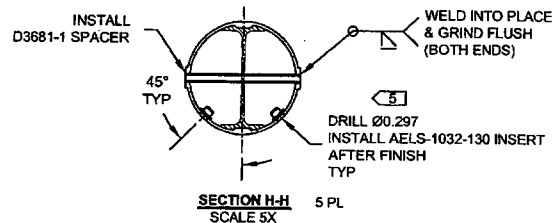
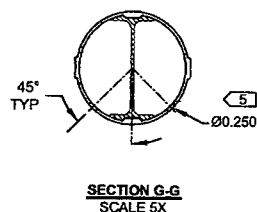
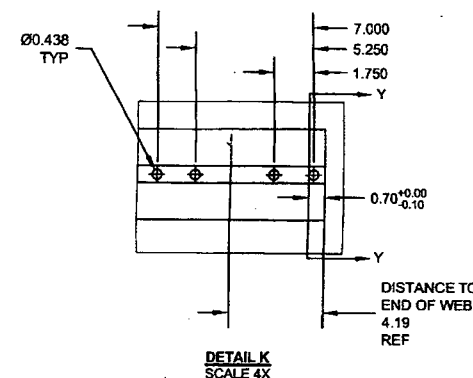
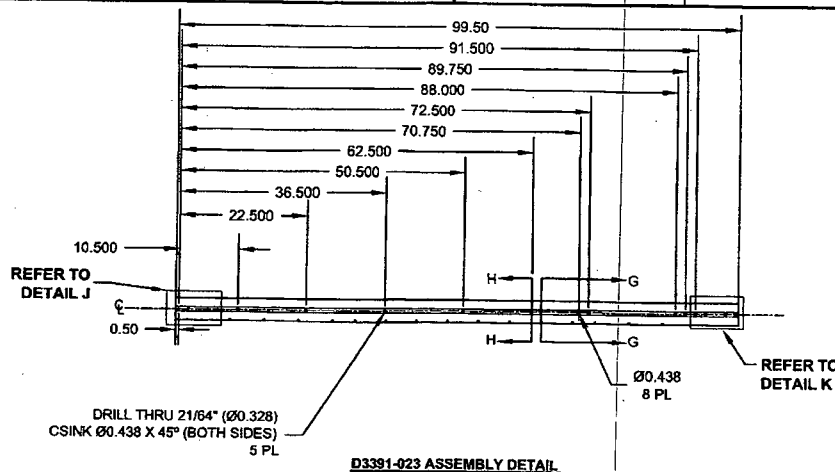
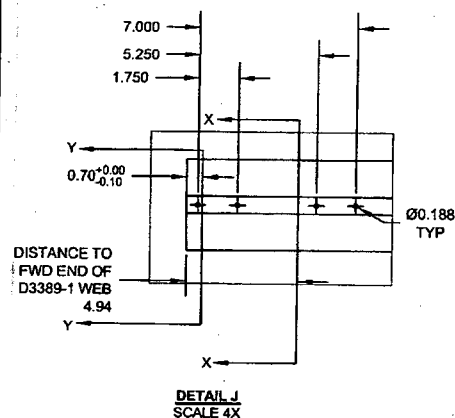
**D3391-013 MID TUBE ASSEMBLY**

- 1) MATERIAL: MAKE FROM D2500-1-100 EXTRUSION
- 2) INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-241/291 PER QSI 015
- 3) WELDING: PER DART QSI 004

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2011-11-04

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MFG. APPR.		D3391	SHEET 5 OF 8
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**D3391-023 MID TUBE ASSEMBLY PARTS LIST**

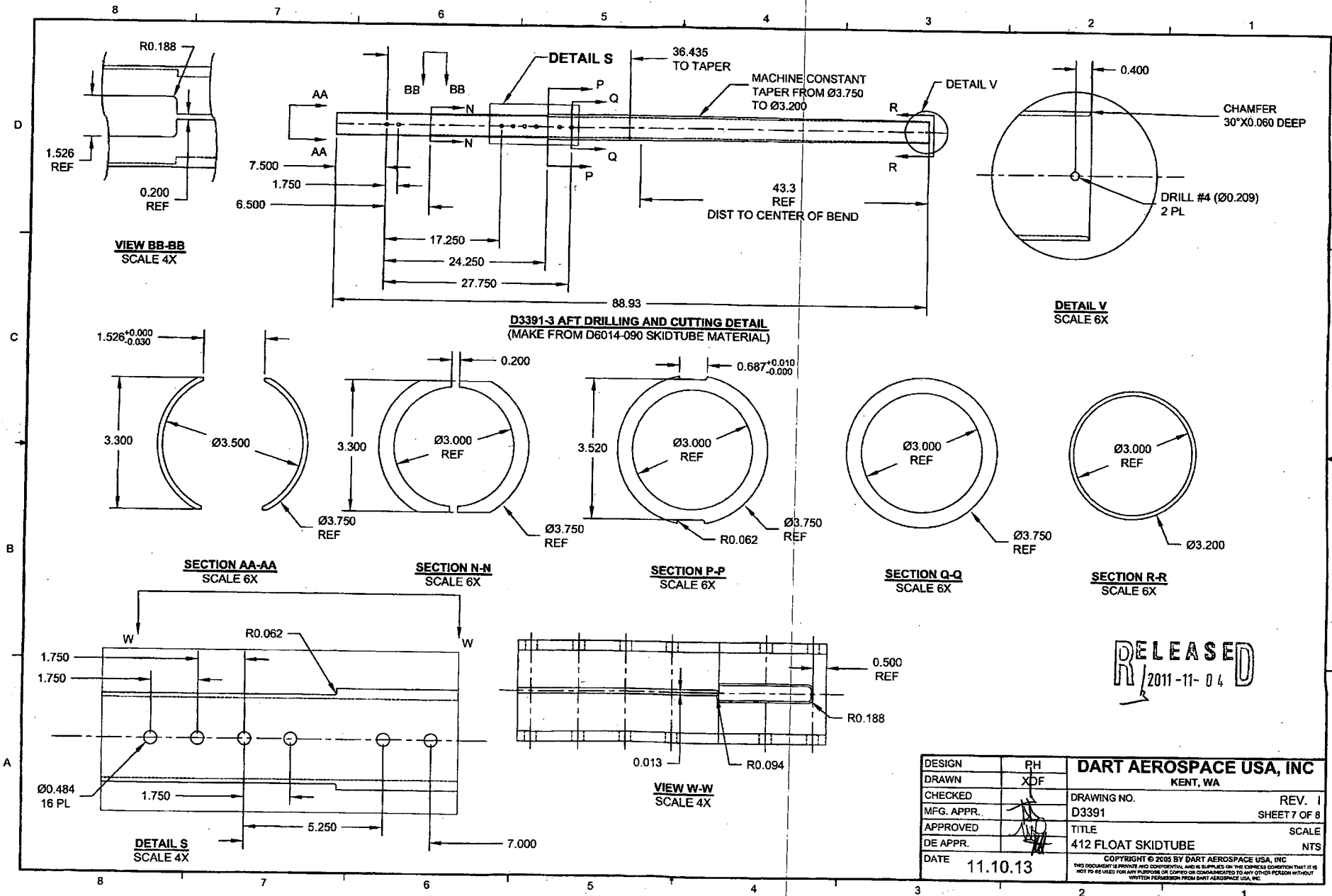
QTY -	PART NUMBER	DESCRIPTION
023		
X	D3391-023	MID TUBE ASSEMBLY
1	D2500-1-100	EXTRUSION
1	D3389-1	WEB
5	D3681-1	SPACER
20	AELS-1032-130	INSERT

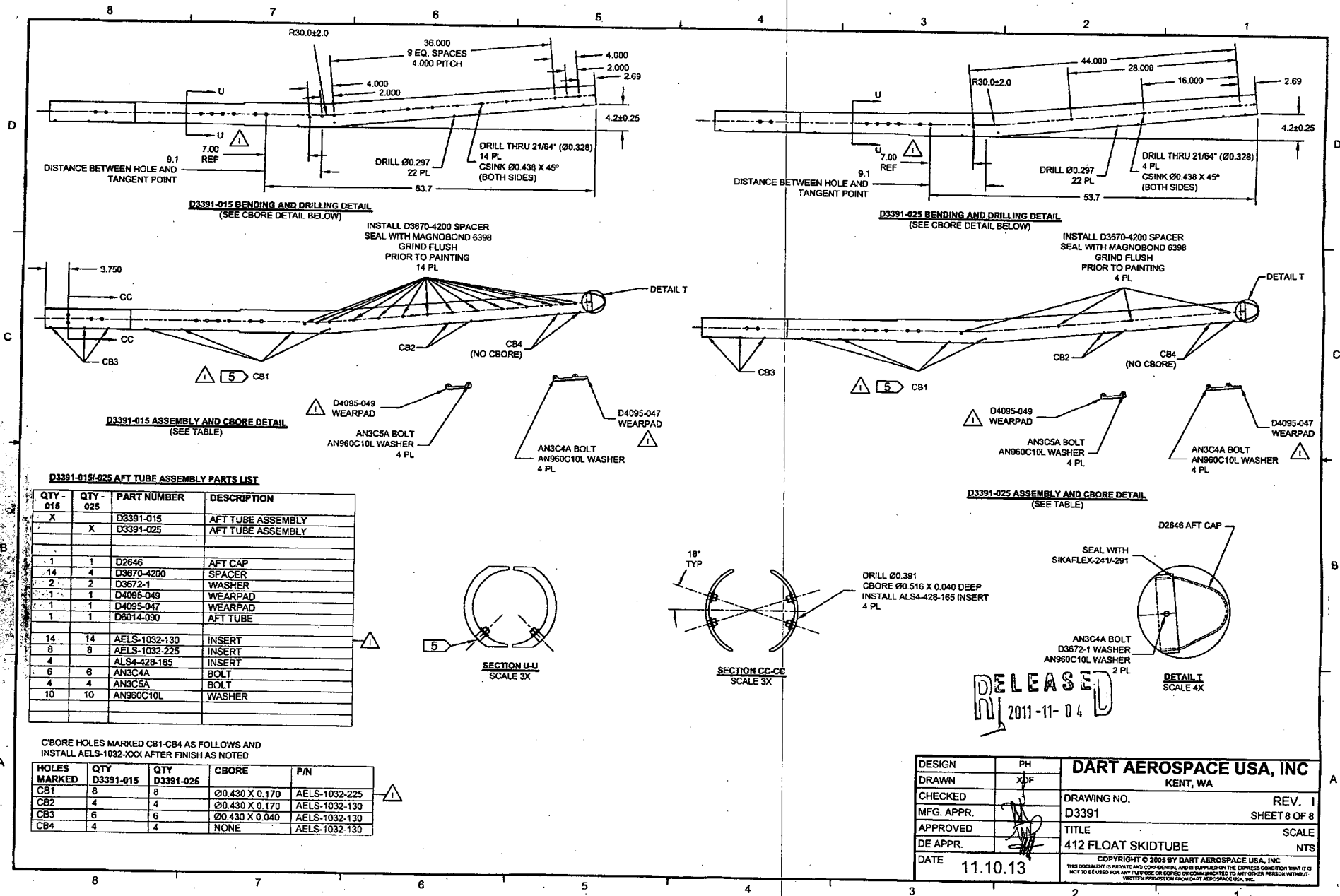
**D3391-023 MID TUBE ASSEMBLY**

- 1) MATERIAL: MAKE FROM D2500-1-100 EXTRUSION
- 2) INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-241/-291 PER QSI 015
- 3) WELDING: PER DART QSI 004

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2011-11-04

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<b>DART AEROSPACE LTD</b>		Order: 112711
Description: Float Skidtube (412)		Part Number: D3391-3
Inspection Dwg: D3391	Rev: I	Page 1 of 1

### FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Lathe Section						
14.000	+/-0.010	14.000	—		Tape	LG-25
3.500	+/-0.010	3.500	—		Vern	CNC-00
Ø3.200	+/-0.010	3.204	—			
Ø3.750	+/-0.010	3.750	—			
30° x 0.060 chamfer	+/-0.010	30° x 0.060	—			
88.93	+/-0.030	88.93	—		Tape	LG-25

Measured by: <i>cm m. l.</i>	Date: 14/02/19
Audited by: <i>27</i>	Date: 14/2/24

HAAS Section						
1.526	+0.000/-0.030	1.505	—		Vern	MLO6
7.500	+/-0.010	7.500	—			
27.750	+/-0.010	27.750	—		M-tape	MLO8
31.750	+/-0.010	31.750	—			
35.250	+/-0.010	35.250	—			
3.300	+/-0.010	3.300	—		Vern	MLO6
0.200	+/-0.010	0.200	—			
3.520	+/-0.010	3.525	—			
0.687	+0.010/-0.000	0.687	—			
R0.062	+/-0.010	R.062	—			
Ø0.484	+0.005/-0.001	Ø0.486	—			

Measured by: <i>mk</i>	Date: 14/03/16
Audited by: <i>DA</i>	Date: 14/03/19

Rev	Date	Change	Revised by	Approved
A	06.04.24	New Issue P/O D3391-015/-025	KJ/JLM	
B	06.06.19	Dwg revision update	KJ/JLM	
C	07.04.20	Ø0.208 dimension removed	KJ/JLM	
D	07.09.06	0.400 dimension removed	KJ/JLM	
E	07.11.23	Dwg Rev. updated	KJ/EC/DD	
F	09.04.27	Dimensions updated per Rev H and NCR09-028	KJ/JLM	
G	09.11.16	Dimension 0.200 removed	KJ	
H	11.06.21	Dimension 44.995 removed	KJ	
I	12.05.15	Dwg Rev updated	KJ	
J	12.05.23	Dimension updated	KJ	
K	12.10.15	88.93 dimension removed	KJ	
L	12.11.28	88.93 dimension added	KJ	

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